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NATIONAL COMMUNICABLE DISEASE CENTER

Morbidity and Mortality

Vol. 18, No. 11

WEEKLY REPORT

For Week Ending March 15, 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE / HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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EPIDEMIOLOGIC NOTES AND REPORTS

BOTULISM – Chicago, Illinois

On March 6, 1969, in Chicago, a 41-year-old man died from botulism. On March 2, he had eaten a late evening snack of eggs, onions, and mushrooms. The mushrooms were home-canned and were noted by the patient to have a spoiled odor. Approximately 10 hours later, he developed dizziness followed by nausea, diarrhea, diplopia, dysphagia, generalized weakness, and progressive respiratory distress. He remained afebrile. On March 3 he was hospitalized and later that evening sustained a respiratory and probable cardiac arrest. He was resuscitated, tracheostomized, and placed on a respiratory. Following the arrest, he remained comatose with dilated pupils. Botulism was diagnosed and on March 4 trivalent (A, B, and E) *Clostridium botulinum* antiserum was administered. Following treatment, he showed little improvement and died 35 hours later.

The mushrooms were gathered locally and canned in October 1968. The canning procedure involved washing, slicing, and boiling at atmospheric pressure for 4 hours. While still hot, the mushrooms were poured into jars, sealed, and stored at 60°F; 21 quarts were prepared. Prior

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TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	11th WEEK ENDED		MEDIAN	CUMULATIVE FIRST 11 WEEKS		
	March 15, 1969	March 16, 1968	1964 - 1968	1969	1968	MEDIAN 1964 - 1968
Aseptic meningitis	25	34	34	318	300	307
Brucellosis	1	2	4	17	12	40
Diphtheria	7	–	2	29	28	29
Encephalitis, primary:						
Arthropod-borne & unspecified	18	11	30	216	160	264
Encephalitis, post-infectious	7	8	20	77	93	13
Hepatitis, serum	116	80	859	1,003	744	9,016
Hepatitis, infectious	1,221	848		9,984	9,024	
Malaria	50	26	11	497	491	83
Measles (rubeola)	859	653	9,652	5,070	6,208	75,605
Meningococcal infections, total	91	74	80	869	882	882
Civilian	87	67	- - -	822	803	- - -
Military	4	7	- - -	47	79	- - -
Mumps	3,030	5,470	- - -	25,258	55,637	- - -
Poliomyelitis, total	–	2	2	1	10	5
Paralytic	–	2	2	1	10	4
Rubella (German measles)	1,803	2,372	- - -	9,432	10,602	- - -
Streptococcal sore throat & scarlet fever	13,398	11,791	13,302	126,993	126,914	126,856
Tetanus	1	2	2	18	22	33
Tularemia	1	1	2	23	16	46
Typhoid fever	7	4	2	46	42	56
Typhus, tick-borne (Rky. Mt. spotted fever)	–	–	–	1	3	6
Rabies in animals	85	55	93	755	796	823

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TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	–	Rabies in man:	–
Botulism: Ky.-1	2	Rubella congenital syndrome:	1
Leptospirosis: Calif.-1	10	Trichinosis: Calif.-1, Colo.-1	17
Plague:	–	Typhus, murine:	2
Psittacosis:	6		

BOTULISM – *(Continued from front page)*

to this man's illness, approximately 16 quarts had been ingested by several persons with no known ill effects.

Laboratory analysis of the patient's serum (prior to treatment) and leftover mushrooms demonstrated type A botulinum toxin. The food was found to contain 400,000 mouse LD 50 doses/g. Cultures of the food are in progress.

(Reported by Hans Flach, M.D., and Louis Kolokoff, M.D., Attending Physicians; Morgan J. O'Connell, M.D., Acting Health Commissioner, Olga Brolnitsky, M.D., Chief Epidemiologist, and June DeSalles, Bacteriologist, Laboratory, Chicago Board of Health; Norman J. Rose, M.D., M.P.H., Chief, Bureau of Epidemiology, Illinois Department of Public Health; and the Anaerobic Bacteriology Laboratory, Bacterial Reference Unit, Laboratory Program, NCDC; and an EIS Officer.)

Editorial Comment:

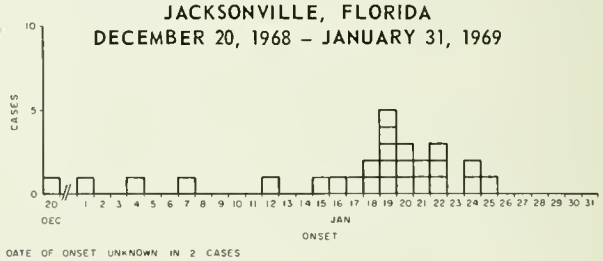
Since 1899, 16 outbreaks of botulism secondary to ingestion of mushrooms have been recorded. Four were due to type A, one to type B, one to type E, and in the remaining outbreaks the types were undetermined. It is of interest that mushrooms are the only vehicle other than fish that has been responsible for a type E outbreak. The not infrequent finding of mushrooms as a cause of botulism and the extremely high toxin titer found in the food responsible for this outbreak suggest that mushrooms provide an excellent medium for growth and toxin production of *C. botulinum*.

This is the second fatal case of type A botulism occurring within the past 3 weeks (MMWR, Vol. 18, No. 9). Of the three common toxin types (A, B, and E), type A binds most rapidly to tissues. This stresses the importance of early diagnosis and treatment with trivalent antiserum.

AN OUTBREAK OF MEASLES IN PREVIOUSLY IMMUNIZED CHILDREN – Florida

Between Dec. 28, 1968, and Feb. 28, 1969, 325 cases of measles were reported from Florida; 293 of these were from Duval County (Jacksonville). During this Duval County epidemic, a private kindergarten in Jacksonville with an enrollment of 145 children from middle and upper socioeconomic families reported 28 measles cases (attack rate 19.3 percent). An unimmunized child who became ill on Dec. 20, 1968, was the index case in the kindergarten (Figure 1). Sporadic cases then occurred in the kindergarten until the week of January 18 when 18 cases were reported.

Figure 1
MEASLES CASES IN A KINDERGARTEN BY DATE OF ONSET*
JACKSONVILLE, FLORIDA
DECEMBER 20, 1968 – JANUARY 31, 1969



*DATE OF ONSET UNKNOWN IN 2 CASES

Of the 28 cases, 25 had histories of previous immunization with live, attenuated measles virus vaccine with Measles Immune Globulin (MIG). In no case was the amount of MIG recorded. Of these 25, 24 had been immunized by physicians in the Jacksonville area and one child had been immunized in Virginia. Dates of vaccination ranged from October 1963 through September 1965. At the time of immunization, 18 of the 25 children were under 12 months of age and seven were from 13 to 20 months of age.* Although vaccine lot numbers were not recorded, it is likely that more than one lot of vaccine was used by the physicians immunizing in two cities over a 2-year period. Preliminary analysis of clinical illness in the 25 previously immunized children indicates that immunization may have mitigated the disease in some cases. Convalescent sera were obtained from seven of the kindergarten cases. Six of these seven had been previously immunized and five had been immunized before 12 months of age (Table 1).

Control specimens were obtained from nine non-ill children in the same kindergarten. All nine had also been immunized with live, attenuated measles virus vaccine with MIG; six of these nine had been immunized under 12

Table 1
Rubeola Hemagglutination Inhibition Titers in Seven Kindergarten Cases of Measles
Jacksonville, Florida – February 1969

Case	Present Age (Years)	Age at Immunization	Date of Immunization	Time Interval Between Onset of Illness and Serum Collection (Days)	Rubeola HI Titer
1	5	6 mos.	3-23-64	9	1:80
2	5	8½ mos.	4-17-64	22	1:160
3	5	no vaccine		9	1:40
4	5	9 mos.	7-21-64	17	≥1:320
5	5	9 mos.	11-19-63	19	≥1:320
6	5	13 mos.	5-11-65	20	≥1:320
7	5	9 mos.	6-30-64	41	1:320

months of age. All nine sera had measles antibody (Table 2).

An additional control group of five children ranging in age from 5 to 7 years was examined serologically. Each child had received live, attenuated measles virus vaccine with MIG from one of the physicians who had immunized the kindergarten children. Of these five, three had been immunized before 12 months of age. Sera from these three had no detectable antibody, but sera from the two children immunized at 13 and 18 months of age had detectable antibody (Table 3).

Between Feb. 16 and 23, 1969, a county wide mass immunization program was conducted in Duval County; 50,724 doses of vaccine were given with 23,713 doses going to preschool children. An additional 2,647 doses had been administered from November through January in local clinics and school epidemic control programs. Although exact numbers are unknown, local physicians also reported a large increase in measles vaccine utilization during this period.

(Reported by J. K. David, Jr., M.D., J. B. Walker, M.D., M. A. Price, M.D., and R. G. Skinner, M.D., Pediatricians, Jacksonville; M. C. Ginter, M.D., Epidemiologist, Jacksonville City Health Department; E. Charlton Prather, M.D., Director, Division of Epidemiology, and the Virology Laboratory, Florida State Board of Health; Laboratory Program, VCDC; and an EIS Officer.)

*For maximum efficacy the Public Health Service Advisory Committee on Immunization Practices now recommends that live, attenuated measles virus vaccine be administered when children are at least 12 months old. The Committee notes, however, that the vaccine may be given to infants between 9 months and 1 year of age with the expectation of decreased efficacy especially if administered simultaneously with Measles Immune Globulin. The amount of Measles Immune Globulin administered is weight dependent, and the individual manufacturer's directions regarding administration should be followed. (MMWR, Vol. 16, No. 32.)

Table 2
Rubeola Hemagglutination Inhibition Titers in Nine Non-III Immunized Kindergarten Students
Jacksonville, Florida – February 1969

Control	Present Age (Years)	Age at Immunization	Date of Immunization	Date of Serum Collection	Rubeola HI Titer
8	5	13 mos.	7-1-64	2-5-69	≥1:320
9	4	11 mos.	8-16-65	2-5-69	1:20
10	5	18 mos.	4-13-65	2-5-69	1:40
11	5	9 mos.	12-21-63	2-7-69	1:20
12	5	9 mos.	2-19-65	2-7-69	1:5
13	5	10 mos.	12-16-63	2-7-69	1:5
14	5	18 mos.	11-6-64	2-12-69	1:80
15	5	8 mos.	9-14-63	2-13-69	1:160
16	6	11 mos.	1-7-64	2-10-69	1:320

Table 3
Rubeola Hemagglutination Inhibition Titers in Five Students
Jacksonville, Florida – February 1969

Control	Present Age (Years)	Age at Immunization	Date of Immunization	Date of Serum Collection	Rubeola HI Titer
17	5	9 mos.	4-16-64	2-5-69	<1:5
18	5	9 mos.	10-64	2-7-69	<1:5
19	6	10 mos.	8-2-63	2-7-69	<1:5
20	6	13 mos.	7-20-63	2-7-69	1:20
21	7	18 mos.	7-8-63	2-12-69	1:10

MADUROMYCOSIS (MADURA FOOT) – Florida

On Aug. 24, 1968, a 49-year-old man saw a physician because of a chronic, hard, indurated granulomatous infection with draining sinuses on his left foot. The patient reported a 6-year history of chronic swelling which began when he stepped on a hard object with his shoes on and bruised his foot. The foot had never returned to normal size or configuration. In 1967, sinuses with drainage of bloody white material developed in the foot. The patient reported some discomfort in his ankle but no actual pain in his foot. He was fully mobile without loss of sensation, but he had had a 15 lb. weight loss during the last year. He gave no history of a penetrating wound in his foot. He had remained active at work in an orange grove. The physician diagnosed Madura foot and referred the patient to a state medical school for confirmation.

On physical examination at the medical school, there were no systemic findings except for those related to the foot which was greatly swollen with numerous draining sinus tracts over the dorsal, medial, and plantar surfaces. There was no swelling of the ankle, but there were three 3 cm nodes in the left inguinal region. An X-ray showed evidence of severe osteomyelitis of the phalanges and metatarsals. A punch biopsy of lesion was interpreted

(Continued on page 96)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED
MARCH 15, 1969 AND MARCH 16, 1968 (11th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	DIPHTHERIA	ENCEPHALITIS			HEPATITIS			MALARIA	
				Primary including unsp. cases		Post-Infectious	Serum	Infectious			
	1969	1969	1969	1969	1968	1969	1969	1969	1968	1969	Cum. 1969
UNITED STATES...	25	1	7	18	11	7	116	1,221	848	50	497
NEW ENGLAND.....	-	-	-	-	2	1	9	85	38	1	26
Maine.*.....	-	-	-	-	-	-	-	4	-	-	-
New Hampshire.....	-	-	-	-	-	-	-	4	1	-	2
Vermont.....	-	-	-	-	-	-	-	3	-	-	-
Massachusetts.....	-	-	-	-	-	1	4	49	19	1	22
Rhode Island.....	-	-	-	-	1	-	-	19	7	-	-
Connecticut.....	-	-	-	-	1	-	5	6	11	-	2
MIDDLE ATLANTIC.....	4	-	-	6	4	-	50	209	124	5	48
New York City.....	1	-	-	5	3	-	26	53	32	-	-
New York, up-State.	-	-	-	-	-	-	4	30	20	1	10
New Jersey.....	2	-	-	1	-	-	19	76	28	-	17
Pennsylvania.....	1	-	-	-	1	-	1	50	44	4	21
EAST NORTH CENTRAL...	5	-	-	1	2	-	7	224	159	5	34
Ohio.....	-	-	-	-	2	-	3	33	42	-	2
Indiana.....	1	-	-	-	-	-	-	10	15	1	2
Illinois.....	-	-	-	1	-	-	1	78	55	4	16
Michigan.....	4	-	-	-	-	-	3	88	29	-	13
Wisconsin.....	-	-	-	-	-	-	-	15	18	-	1
WEST NORTH CENTRAL...	1	1	-	1	-	1	2	50	46	6	37
Minnesota.....	1	1	-	-	-	1	1	9	16	-	3
Iowa.....	-	-	-	1	-	-	-	11	7	-	3
Missouri.....	-	-	-	-	-	-	-	10	20	2	9
North Dakota.....	-	-	-	-	-	-	-	1	-	-	1
South Dakota.....	-	-	-	-	-	-	-	8	-	-	-
Nebraska.....	-	-	-	-	-	-	-	1	-	-	3
Kansas.....	-	-	-	-	-	-	1	10	3	4	18
SOUTH ATLANTIC.....	3	-	-	3	-	-	3	82	68	16	174
Delaware.....	-	-	-	-	-	-	I	1	5	1	1
Maryland*.....	-	-	-	-	-	-	-	13	13	1	5
Dist. of Columbia..	-	-	-	-	-	-	-	3	2	-	-
Virginia.....	-	-	-	1	-	-	-	7	14	1	9
West Virginia.*....	-	-	-	-	-	-	-	4	6	-	-
North Carolina.....	1	-	-	2	-	-	1	16	10	9	85
South Carolina.....	-	-	-	-	-	-	-	6	-	2	17
Georgia.....	-	-	-	-	-	-	-	16	8	2	46
Florida.....	2	-	-	-	-	-	1	16	10	-	11
EAST SOUTH CENTRAL...	2	-	-	-	-	1	-	65	68	-	14
Kentucky.....	1	-	-	-	-	-	-	32	36	-	10
Tennessee.....	-	-	-	-	-	I	-	16	23	-	-
Alabama.....	-	-	-	-	-	-	-	8	4	-	4
Mississippi.....	1	-	-	-	-	-	-	9	5	-	-
WEST SOUTH CENTRAL...	-	-	1	-	-	-	2	81	64	-	12
Arkansas.....	-	-	-	-	-	-	-	27	-	-	4
Louisiana.....	-	-	-	-	-	-	1	15	17	-	8
Oklahoma.....	-	-	-	-	-	-	-	5	16	-	-
Texas.....	-	-	1	-	-	-	1	34	31	-	-
MOUNTAIN.....	-	-	2	3	-	-	-	70	38	4	37
Montana.....	-	-	-	-	-	-	-	6	2	-	-
Idaho.....	-	-	-	-	-	-	-	2	1	-	1
Wyoming.....	-	-	-	-	-	-	-	6	3	-	-
Colorado.....	-	-	-	-	-	-	-	27	7	4	34
New Mexico.....	-	-	-	3	-	-	-	7	6	-	1
Arizona.....	-	-	2	-	-	-	-	7	10	-	1
Utah.....	-	-	-	-	-	-	-	15	8	-	-
Nevada.....	-	-	-	-	-	-	-	-	1	-	-
PACIFIC.....	10	-	4	4	3	4	43	355	243	13	115
Washington.....	-	-	-	-	-	-	-	81	25	1	3
Oregon.....	-	-	-	-	-	-	-	21	14	-	5
California.....	7	-	4	4	3	4	43	249	203	9	96
Alaska.....	-	-	-	-	-	-	-	2	-	-	-
Hawaii.....	3	-	-	-	-	-	-	2	1	3	11
Puerto Rico.....	1	-	-	-	-	-	-	18	27	-	-

*Delayed reports: Hepatitis, infectious: Me. 8, Md. 4, W. Va. 1 (1968)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

MARCH 15, 1969 AND MARCH 16, 1968 (11th WEEK) - CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS	POLIOMYELITIS			RUBELLA
		Cumulative			Cumulative			Total	Paralytic		
	1969	1969	1968	1969	1969	1968	1969	1969	1969	Cum. 1969	1969
UNITED STATES...	859	5,070	6,208	91	869	882	3,030	-	-	1	1,803
NEW ENGLAND.....	31	244	247	4	28	44	314	-	-	-	91
Maine*.....	-	2	10	-	1	2	21	-	-	-	9
New Hampshire.....	2	60	46	-	-	3	9	-	-	-	3
Vermont.....	-	-	-	-	-	1	20	-	-	-	2
Massachusetts.*....	7	44	104	3	14	22	148	-	-	-	49
Rhode Island.....	-	3	1	-	3	4	47	-	-	-	4
Connecticut.....	22	135	86	1	10	12	69	-	-	-	24
MIDDLE ATLANTIC.....	242	1,479	792	5	110	120	126	-	-	-	86
New York City.....	184	997	149	3	22	22	68	-	-	-	26
New York, Up-State.	27	143	451	-	17	14	NN	-	-	-	34
New Jersey.....	18	179	152	1	37	45	58	-	-	-	26
Pennsylvania.....	13	160	40	1	34	39	NN	-	-	-	-
EAST NORTH CENTRAL...	174	614	1,616	14	106	89	707	-	-	-	385
Ohio.....	18	63	112	3	31	20	61	-	-	-	33
Indiana.....	94	198	250	4	20	12	46	-	-	-	35
Illinois.....	32	113	705	3	15	20	151	-	-	-	60
Michigan.....	8	64	100	4	34	28	171	-	-	-	95
Wisconsin.....	22	176	449	-	6	9	278	-	-	-	162
WEST NORTH CENTRAL...	28	163	114	8	49	39	441	-	-	-	208
Minnesota.....	-	1	3	1	8	6	62	-	-	-	5
Iowa.....	19	87	22	1	6	3	359	-	-	-	85
Missouri.....	-	11	9	4	21	7	12	-	-	-	104
North Dakota.....	3	5	51	-	-	2	8	-	-	-	13
South Dakota.....	-	-	3	-	-	4	NN	-	-	-	-
Nebraska.....	6	59	19	2	4	4	-	-	-	-	-
Kansas.....	-	-	7	-	10	13	-	-	-	-	1
SOUTH ATLANTIC.....	135	927	454	19	169	194	196	-	-	-	216
Delaware.....	8	16	4	-	3	1	3	-	-	-	8
Maryland*.....	-	8	35	-	16	12	10	-	-	-	35
Dist. of Columbia..	-	-	4	-	2	7	-	-	-	-	-
Virginia.....	72	351	95	7	29	14	10	-	-	-	25
West Virginia.....	8	80	113	1	7	4	91	-	-	-	38
North Carolina.....	33	80	50	-	19	42	NN	-	-	-	-
South Carolina.....	-	47	8	5	26	39	21	-	-	-	1
Georgia.....	-	1	3	2	28	34	-	-	-	-	-
Florida.....	14	344	142	4	39	41	61	-	-	-	109
EAST SOUTH CENTRAL...	6	42	118	5	41	71	139	-	-	-	196
Kentucky.....	4	17	40	2	10	27	62	-	-	-	49
Tennessee.....	2	10	16	2	21	20	72	-	-	-	44
Alabama.....	-	-	33	-	7	12	5	-	-	-	-
Mississippi.....	-	15	29	1	3	12	-	-	-	-	103
WEST SOUTH CENTRAL...	174	1,227	1,536	14	116	192	332	-	-	1	160
Arkansas.....	-	2	-	4	15	10	2	-	-	-	-
Louisiana.....	-	8	1	2	33	46	1	-	-	-	-
Oklahoma.....	1	103	73	-	6	39	1	-	-	-	3
Texas*.....	173	1,114	1,462	8	62	97	328	-	-	1	157
MOUNTAIN.....	17	95	318	2	27	12	164	-	-	-	144
Montana.....	-	3	54	-	2	1	15	-	-	-	4
Idaho.....	-	-	10	2	5	2	7	-	-	-	1
Wyoming.....	-	-	31	-	-	-	2	-	-	-	44
Colorado.....	8	15	110	-	6	6	18	-	-	-	65
New Mexico.....	7	41	36	-	5	-	30	-	-	-	3
Arizona.....	2	34	73	-	6	1	89	-	-	-	26
Utah.....	-	1	2	-	1	-	3	-	-	-	1
Nevada.....	-	1	2	-	2	2	-	-	-	-	-
PACIFIC.....	52	279	1,013	20	223	121	611	-	-	-	317
Washington.....	4	24	275	2	14	19	188	-	-	-	55
Oregon.....	2	36	220	1	7	11	17	-	-	-	20
California.....	44	207	497	17	196	82	393	-	-	-	222
Alaska.....	1	10	-	-	-	-	3	-	-	-	3
Hawaii.....	1	2	21	-	6	9	10	-	-	-	17
Puerto Rico.....	9	125	104	-	3	14	25	-	-	-	2

*Delayed reports: Measles: Mass. delete 4, Tex. delete 120
Mumps: Me. 5
Rubella: Me. 1, Md. delete 4

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

MARCH 15, 1969 AND MARCH 16, 1968 (11th WEEK) - CONTINUED

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER	TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969
UNITED STATES...	13,398	1	18	1	23	7	46	-	1	85	755
NEW ENGLAND.....	1,587	-	-	-	-	-	-	-	-	-	2
Maine.*.....	29	-	-	-	-	-	-	-	-	-	1
New Hampshire.....	25	-	-	-	-	-	-	-	-	-	-
Vermont.....	2	-	-	-	-	-	-	-	-	-	1
Massachusetts.....	205	-	-	-	-	-	-	-	-	-	-
Rhode Island.....	70	-	-	-	-	-	-	-	-	-	-
Connecticut.....	1,256	-	-	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC.....	649	-	2	-	1	1	8	-	-	2	12
New York City.....	26	-	-	-	1	-	5	-	-	-	-
New York, Up-State.	501	-	2	-	-	-	1	-	-	2	12
New Jersey.....	NN	-	-	-	-	-	1	-	-	-	-
Pennsylvania.....	122	-	-	-	-	1	1	-	-	-	-
EAST NORTH CENTRAL...	1,413	-	3	-	2	1	2	-	-	5	34
Ohio.....	316	-	-	-	-	1	2	-	-	2	6
Indiana.....	519	-	-	-	1	-	-	-	-	2	6
Illinois.....	183	-	1	-	1	-	-	-	-	-	5
Michigan.....	241	-	2	-	-	-	-	-	-	-	1
Wisconsin.....	154	-	-	-	-	-	-	-	-	1	16
WEST NORTH CENTRAL...	614	-	-	-	3	-	-	-	-	17	130
Minnesota.....	49	-	-	-	-	-	-	-	-	8	39
Iowa.....	186	-	-	-	-	-	-	-	-	4	24
Missouri.....	190	-	-	-	3	-	-	-	-	3	43
North Dakota.....	100	-	-	-	-	-	-	-	-	2	18
South Dakota.....	34	-	-	-	-	-	-	-	-	-	-
Nebraska.....	11	-	-	-	-	-	-	-	-	-	-
Kansas.....	44	-	-	-	-	-	-	-	-	-	6
SOUTH ATLANTIC.....	1,592	1	6	-	10	1	5	-	-	29	255
Delaware.....	21	-	-	-	-	-	-	-	-	-	-
Maryland.....	254	-	-	-	-	1	1	-	-	-	-
Dist. of Columbia..	-	-	2	-	-	-	-	-	-	-	-
Virginia.....	673	-	-	-	-	-	-	-	-	17	172
West Virginia.....	333	-	-	-	2	-	-	-	-	5	32
North Carolina.....	18	-	1	-	4	-	1	-	-	-	1
South Carolina.....	81	-	1	-	-	-	1	-	-	-	-
Georgia.....	16	-	-	-	-	-	1	-	-	1	16
Florida.....	196	1	2	-	4	-	1	-	-	6	34
EAST SOUTH CENTRAL...	1,745	-	-	1	3	2	6	-	1	15	139
Kentucky.....	216	-	-	-	-	-	-	-	-	6	84
Tennessee.....	1,176	-	-	1	3	2	5	-	1	7	44
Alabama.....	171	-	-	-	-	-	-	-	-	2	11
Mississippi.....	182	-	-	-	-	-	1	-	-	-	-
WEST SOUTH CENTRAL...	878	-	3	-	2	1	7	-	-	8	89
Arkansas.....	16	-	-	-	-	-	4	-	-	-	4
Louisiana.....	7	-	2	-	-	-	-	-	-	-	4
Oklahoma.....	33	-	1	-	2	-	-	-	-	3	14
Texas.....	822	-	-	-	-	1	3	-	-	5	67
MOUNTAIN.....	3,208	-	-	-	2	-	10	-	-	3	23
Montana.....	39	-	-	-	-	-	-	-	-	-	-
Idaho.....	164	-	-	-	-	-	-	-	-	-	-
Wyoming.*.....	314	-	-	-	-	-	5	-	-	1	7
Colorado.....	2,167	-	-	-	-	-	1	-	-	-	1
New Mexico.....	304	-	-	-	1	-	2	-	-	1	7
Arizona.*.....	88	-	-	-	-	-	1	-	-	1	5
Utah.....	132	-	-	-	1	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	1	-	-	-	3
PACIFIC.....	1,712	-	4	-	-	1	8	-	-	6	71
Washington.....	524	-	-	-	-	-	-	-	-	-	-
Oregon.....	124	-	-	-	-	-	-	-	-	-	-
California.....	942	-	4	-	-	1	8	-	-	6	71
Alaska.....	37	-	-	-	-	-	-	-	-	-	-
Hawaii.....	85	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	1	-	1	-	-	-	1	-	-	-	5

*Delayed reports: SST: Me. 16

Rabies in animals: Wyo. 3, Ariz. 2

Week No. 11

TABLE IV DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED MARCH 15, 1969

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes		Pneumonia and Influenza	Under 1 year
	All Ages	65 years and over	All Ages	All Causes
NEW ENGLAND:	756	481	55	27
Boston, Mass.	254	156	18	10
Bridgeport, Conn.	57	41	6	-
Cambridge, Mass.	20	13	4	-
Fall River, Mass.	30	23	1	-
Hartford, Conn.	57	35	2	6
Lowell, Mass.	27	20	2	-
Lynn, Mass.	20	7	2	-
New Bedford, Mass.	33	22	4	2
New Haven, Conn.	54	29	2	2
Providence, R. I.	54	36	5	1
Somerville, Mass.	12	7	3	-
Springfield, Mass.	41	25	2	3
Waterbury, Conn.	27	17	-	2
Worcester, Mass.	70	50	4	1
MIDDLE ATLANTIC:	3,628	2,131	135	189
Albany, N. Y.	46	28	-	1
Allentown, Pa.	32	22	-	1
Buffalo, N. Y.	150	77	3	12
Camden, N. J.	51	30	1	2
Elizabeth, N. J.	33	21	-	2
Erie, Pa.	31	21	4	1
Jersey City, N. J.	83	47	7	6
Newark, N. J.	83	36	1	5
New York City, N. Y.	1,797	1,067	78	90
Paterson, N. J.	26	14	-	2
Philadelphia, Pa.	705	406	7	42
Pittsburgh, Pa.	172	94	6	4
Reading, Pa.	50	36	1	3
Rochester, N. Y.	120	78	13	6
Schenectady, N. Y.	14	8	1	1
Scranton, Pa.	43	27	4	1
Syracuse, N. Y.	78	52	2	3
Trenton, N. J.	50	24	2	3
Utica, N. Y.	33	23	4	1
Yonkers, N. Y.	31	20	1	3
EAST NORTH CENTRAL:	2,652	1,531	101	126
Akron, Ohio	66	44	3	1
Canton, Ohio	35	23	3	1
Chicago, Ill.	766	398	29	38
Cincinnati, Ohio	162	103	8	8
Cleveland, Ohio	206	106	4	17
Columbus, Ohio	131	82	3	3
Dayton, Ohio	84	52	6	4
Detroit, Mich.	351	197	13	19
Evansville, Ind.	46	32	1	-
Flint, Mich.	48	22	1	2
Fort Wayne, Ind.	46	35	4	1
Gary, Ind.	44	22	5	3
Grand Rapids, Mich.	58	37	4	2
Indianapolis, Ind.	176	91	3	10
Madison, Wis.	44	23	5	6
Milwaukee, Wis.	105	80	-	1
Peoria, Ill.	50	29	1	3
Rockford, Ill.	27	18	1	2
South Bend, Ind.	44	35	2	1
Toledo, Ohio	107	63	4	3
Youngstown, Ohio	56	39	1	1
WEST NORTH CENTRAL:	878	550	40	36
Des Moines, Iowa	64	43	3	1
Duluth, Minn.	12	6	2	-
Kansas City, Kans.	45	29	3	2
Kansas City, Mo.	138	83	3	7
Lincoln, Nebr.	21	13	3	-
Minneapolis, Minn.	122	78	4	6
Omaha, Nebr.	75	48	1	2
St. Louis, Mo.	271	160	7	11
St. Paul, Minn.	66	49	5	4
Wichita, Kans.	64	41	9	3
SOUTH ATLANTIC:	1,310	697	63	61
Atlanta, Ga.	170	75	7	12
Baltimore, Md.	264	133	10	15
Charlotte, N. C.	57	33	2	4
Jacksonville, Fla.	124	65	8	3
Miami, Fla.	108	62	2	6
Norfolk, Va.	54	32	4	5
Richmond, Va.	86	48	3	1
Savannah, Ga.	38	16	4	2
St. Petersburg, Fla.	121	100	8	3
Tampa, Fla.	82	41	8	6
Washington, D. C.	155	67	5	4
Wilmington, Del.	51	25	2	-
EAST SOUTH CENTRAL:	729	398	46	30
Birmingham, Ala.	110	58	5	5
Chattanooga, Tenn.	56	26	5	2
Knoxville, Tenn.	47	30	5	1
Louisville, Ky.	158	89	19	11
Memphis, Tenn.	161	80	6	3
Mobile, Ala.	50	30	2	4
Montgomery, Ala.	33	18	3	-
Nashville, Tenn.	114	67	1	4
WEST SOUTH CENTRAL:	1,240	677	71	90
Austin, Tex.	31	17	5	2
Baton Rouge, La.	47	25	1	3
Corpus Christi, Tex.	25	13	1	1
Dallas, Tex.	159	81	9	11
El Paso, Tex.*	41	22	4	4
Fort Worth, Tex.	80	44	9	4
Houston, Tex.	245	107	10	31
Little Rock, Ark.	48	29	1	4
New Orleans, La.	169	86	6	3
Oklahoma City, Okla.	132	82	7	8
San Antonio, Tex.	133	83	3	13
Shreveport, La.	61	38	9	4
Tulsa, Okla.	69	50	6	2
MOUNTAIN:	487	281	25	24
Albuquerque, N. Mex.	46	26	4	2
Colorado Springs, Colo.	25	12	3	3
Denver, Colo.	145	84	6	4
Ogden, Utah	26	17	3	2
Phoenix, Ariz.	112	59	4	7
Pueblo, Colo.	24	16	3	1
Salt Lake City, Utah	48	31	1	3
Tucson, Ariz.	61	36	1	2
PACIFIC:	1,792	1,131	66	71
Berkeley, Calif.	15	15	-	-
Fresno, Calif.	47	26	2	5
Glendale, Calif.	48	36	2	-
Honolulu, Hawaii	57	27	1	3
Long Beach, Calif.	88	59	4	2
Los Angeles, Calif.	592	384	22	21
Oakland, Calif.	81	57	2	5
Pasadena, Calif.	43	41	2	-
Portland, Oreg.	152	88	9	4
Sacramento, Calif.	60	36	1	1
San Diego, Calif.	104	52	1	6
San Francisco, Calif.	222	129	5	7
San Jose, Calif.	45	27	2	1
Seattle, Wash.	140	94	7	7
Spokane, Wash.	45	23	4	6
Tacoma, Wash.	53	37	2	3
Total	13,472	7,877	602	654

*Estimate - based on average percent of divisional total.

Cumulative Totals
including reported corrections for previous weeks

All Causes, All Ages	160,207
All Causes, Age 65 and over	92,923
Pneumonia and Influenza, All Ages	10,973
All Causes, Under 1 Year of Age	7,199

MADUROMYCOSIS – *(Continued from page 91)*

as showing "acute and chronic inflammatory reactions with ulceration of the epidermis." The lesions were "consistent with actinomycosis or nocardiosis." The patient was started on a course of therapy consisting of 10 g. triple sulfa daily for 4 weeks and followed by 5 g. daily for 2 to 4 months.

On Dec. 1, 1968, the patient was seen after 1 month of treatment and the foot appeared markedly improved with less edema, inflammation, and purulence. The patient was seen again during the first week in March; continued improvement was noted. The sulfa treatment is continuing and the patient is ambulatory and working.

(Reported by Donald D. Dieter, M.D., Physician, Eustis, Florida; E. R. Woodward, M.D., Professar and Head, Department of Surgery, and L. E. Cluff, M.D., Professor and Chairman, Department of Medicine, The J. Hillis Miller Health Center, University af Flarida; J. Basil Hall, M.D., Health Officer, Lake County Health Department; E. Charlton Prather, M.D., Director, Division af Epidemialagy, Flarida Board of Health; and an EIS Officer.)

Reference:
[1] Freese, J.W., *et al*: Pulmonary infection by *Nocardio asteroides:* Findings in 11 Cases. *J. Thorac Cardiov Surg 46*(4): 537, 1963.

INTERNATIONAL NOTES
INFLUENZA – 1969

EUROPE

Belgium (reported February) – Three strains of influenza B were isolated during the influenza A2/Hong Kong/'68 epidemic in Brussels and the surrounding area.

Denmark (reported January 25) – Sporadic cases of influenza-like disease were noted in various parts of the country. Serologic evidence of A2 infection was obtained in five cases.

Finland (reported February 1) – An epidemic of influenza was developing in the general population; 15 strains of A2/Hong Kong/'68 were isolated, and serologic evidence was obtained in many cases. Scattered cases had been noted earlier in January.

France (reported March) – Influenza-like disease has increased in Paris and the surrounding area and in the eastern, western, and southwestern parts of the country. In addition, localized outbreaks and sporadic cases were reported in Lyons. All age groups were affected. The disease was generally mild. Strains of A2/Hong Kong/'68 were isolated and serologic evidence of A2/Hong Kong/'68 was also obtained.

Ireland (reported January 11) – A family outbreak of influenza-like illness associated with A2/Hong Kong/'68 virus occurred in Dublin in late December following the return from London of one of the children. There has been no evidence of increased incidence in the population generally.

THE MORBIDITY AND MORTALITY WEEKLY REPORT, WITH A CIRCULATION OF 17,000 IS PUBLISHED AT THE NATIONAL COMMUNICABLE DISEASE CENTER, ATLANTA, GEORGIA.

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